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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,008	08/22/2003	Sung-Jae Moon	YOM-0048	8963

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Bloomfield, CT 06002

EXAMINER

NGUYEN, HOAN C

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,008

Applicant(s)

MOON, SUNG-JAE

Examiner

HOAN C. NGUYEN

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 6, 16, 17 and 23-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Election/Restrictions***

Applicant's election without traverse of Group I and First embodiment (Fig. 6) in the reply filed on 16 March 2005 is acknowledged.

Claim 6 cites "the drivers are mounted on the flexible printed circuit films", which does not disclose in Fig. 3 and 6 of the elected species. In both embodiments in the present application, the drivers 400 are mounted on substrate of liquid crystal panel 300.

Claim 16 cites the limitations: "the first driving signal wire is formed as a same layer with the second display signal wire" and "the first connecting line comprises a connecting member that is formed as a same layer with the pixel electrodes", which does not disclose in Fig. 3 and 6 of the elected species. The specification does not disclose these combined limitations in both embodiments in the present application.

Claims 6, 16-17 and 23-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 16 March 2005. Therefore, claims 1-5, 7-15 and 18-22 are considered with the elected species.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 7-15 and 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Imajo et al. (US2001/0015709).

Imajo et al. teach (Figs. 34-37) a liquid crystal display device comprising:

Claim 1:

- a liquid crystal panel including
 - a first display signal wire having a plurality of a first display signal lines (drain lines DL),
 - a second signal wire having a plurality of a second display signal lines (gate lines GL) that cross the first display signal lines,
 - a plurality of switching elements (in abstract) each of which is connected to both of one of the first display signal lines and one of the second display signal lines, and
 - pixel electrodes (in abstract) connected to the switching elements;
- a first driving signal wire (data lines DDL/DGL and power supply lines PWL) transmitting driving signals for the first or second display signal lines, wherein the first driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel

Art Unit: 2871

electrodes, and includes a first pad connected thereto at its near end

(PAD-A or PAD-B);

- a plurality of first connecting lines (Fig. 24-28) disposed between the first driving signal wire (data lines DDL/DGL and power supply lines PWL) and at least part of the first display signal wire (drain lines DL), and connected to at least one of the first driving signal wire and the part of the first display signal wire.

Claims 2-4:

- a plurality of drivers respectively connected to the first driving signal wire, wherein each of the drivers is in the form of a chip (IC1/IC2) and each of the drivers is formed on the liquid crystal panel as Fig. 35 shown.

Claim 7:

- a second driving signal wire (data lines DDL/DGL and power supply lines PWL) transmitting driving signals for the first or second display signal lines, wherein the second driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel electrodes, and includes a second pad connected thereto at its near end (PAD-A).

Claim 9:

- a plurality of second connecting lines (Fig. 24-28 shown) disposed between the second driving signal wire and at least another part of the first display signal wire, and connected to at least one of the second driving signal wire and the another part of the first display signal wire.

Art Unit: 2871

Claim 14:

- a shorting bar (short-circuit line/common line ST) connected to the first driving signal wire DL.

wherein

Claim 5:

- each of the drivers is directly connected to the first driving signal wire as Fig. 35 shown.

Claim 8:

- a distance between the first driving signal wire and the first display signal wire is smaller than a distance between the second driving signal wire and the first display signal wire as Fig. 35 shown.

Claim 10:

- the first and second connecting lines are alternately disposed as Fig. 26 shown (wherein connecting lines connect to BP outside and inside alternately).

Claim 11:

- one end of the connecting line is connected to the first display signal wire (DL), and another end thereof is connected to the first driving signal wire via IC.

Claim 12:

Art Unit: 2871

- the first connecting line comprises two sections that are electrically separated each other, and the two sections are respectively connected to the first display signal wire (DL) and the first driving signal wire via IC.

Claim 13:

- the first connecting line is electrically connected to the first display signal wire (DL) and the first driving signal wire via IC.

Claim 15:

- the first driving signal wire further comprises a plurality of second pads connected at PAD-A thereto at its intermediate portion.

Claim 18:

- the first driving signal wire extends to an edge of the panel.

Claim 19:

- the first display signal wire transmits gate signals for inherently turning on and off the switching elements, and the second display signal wire transmits data signals for the pixel electrodes applied through the switching elements.

Claim 20:

- the first driving signal wire (data lines DDL/DGL and power supply lines PWL) transmits a gate-off voltage or a ground voltage (paragraph 133).

Claims 21-22:

- the first display signal wire (data lines DDL/DGL and power supply lines PWL) transmits data signals for the pixel electrodes, and the second display signal wire (data lines DDL/DGL and power supply lines PWL)

controls inherently turning on and off of the switching elements such that the transmission of the data signals to the pixel electrodes is controlled, wherein the first driving signal wire transmits gray voltages, a clock signal, or a driving voltage to the drivers (paragraph 132).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Shiraki et al. (US 5671026 A) disclose a liquid crystal display device with TFT ESD protective devices between I/O terminals or with a short-circuited alignment film.

Mori et al. (US 5712493 A) disclose a display device having driving circuits at the periphery of a substrate with a rectangular semiconductor chip having two opposite long sides and two opposite short sides.

Lim (US 6005647 A) discloses shorting bar of a liquid crystal display (LCD) including a plurality of odd gate lines and a plurality of even gate lines, each having a respective pad region. The plurality of odd gate lines are to a first shorting bar. The plurality of even gate lines are connected to both a second shorting bar connected and a third shorting bar. The resistance of the combined second shorting bar and third shorting bar is substantially similar to the resistance of the first shorting bar.

Art Unit: 2871


Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN
Examiner
Art Unit 2871

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TARIFUR R. CHOWDHURY
PRIMARY EXAMINER